

METHOD FOR FORMING NON-AMORPHOUS, ULTRA-THIN  
SEMICONDUCTOR DEVICES USING SACRIFICIAL IMPLANTATION LAYER

ABSTRACT

**[00030]** A method for forming a semiconductor device includes defining a sacrificial layer over a single crystalline substrate. The sacrificial layer is implanted with a dopant species in a manner that prevents the single crystalline substrate from becoming substantially amorphized. The sacrificial layer is annealed so as to drive said dopant species from said sacrificial layer into said single crystalline substrate.